

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE DEPARTMENT OF COMMERCE

In the Matter of the Noble Flat Hill Windpark, LLC Applications for a 201 MW Large Wind Energy Conversion System Site Permit, a 230 kV High Voltage Transmission Line Route Permit and Certificates of Need for the Noble Flat Hill Windpark I Project in Clay County

**SUMMARY OF TESTIMONY,
FINDINGS OF FACT,
CONCLUSIONS AND
RECOMMENDATION**

This matter was assigned to Administrative Law Judge (ALJ) Beverly Jones Heydinger to provide a summary of public testimony in the certificate of need (Docket 08-951) and site permit (Docket 08-1134) applications by Noble Flat Hill Windpark, LLC (Noble) for a 201 MW wind energy conversion system and associated facilities. Judge Heydinger was also assigned to conduct a contested case hearing on Noble's application for a 230 kV Transmission Line Project route permit (Docket 08-988).

A public hearing was held on October 13, 2009. No evidentiary hearings were held in Dockets 08-951 and 08-1134. An evidentiary hearing in Docket 08-988 was held in conjunction with the public hearing. The contested case hearing record closed on October 30, 2009, when a Brief and proposed Findings of Fact were filed by the Applicant, Noble Flat Hill Windpark I, LLC (Noble).

Appearances: Matthew Seltzer and Brian Meloy, Attorneys at Law, Leonard, Street and Deinard, appeared on behalf of Noble. Michael Beckner, Project Manager, Flat Hill I wind project, and Sean Flannery, Project Manager with Tetra Tech Environmental Consulting Firm, also attended on behalf of Noble. Karen Hammel, Assistant Attorney General, appeared on behalf of the Minnesota Department of Commerce - Office of Energy Security, Energy Facility Permitting (EFP). David Birkholz, Project Manager, Minnesota Department of Commerce – Office of Energy Security, Energy Facility Permitting, appeared on behalf of the EFP Staff. Bret Eknes, Planning Director, appeared on behalf of the Minnesota Public Utilities Commission (Commission).

STATEMENT OF ISSUE

Should the Minnesota Public Utilities Commission (Commission) issue a high voltage transmission line (HVTL) route permit to Applicant Noble Flat Hill Windpark I,

LLC (Applicant or Noble) and if so, for which of the routes under consideration and under what conditions?

Based on information in the Route Permit Application to the Commission (the Route Permit Application or RPA), the testimony at the public hearing, written comments and exhibits received in this proceeding, the ALJ makes the following:

FINDINGS OF FACT

Procedural History

1. The proposed project (Proposed Project) consists of the Noble Flat Hill Windpark I (Proposed Windpark) and associated HVTL facilities (Proposed HVTL). The Proposed Project is being developed by Applicant, a wholly-owned subsidiary of Noble Environmental Power, LLC (NEP).

2. On August 29, 2008, Applicant submitted its Route Permit Application (RPA) to the Commission as required by Minnesota Rules Chapter 7850 (previously codified as part of Minnesota Rules Chapter 7849) and Minnesota Statutes Chapter 216E. The Proposed HVTL for which a permit is being requested includes:

- A new single circuit 230 kilovolt (kV) transmission line to capture energy generated by the Proposed Windpark and connect to the Otter Tail Power Company (OTP) Sheyenne-Audubon 230 kV transmission line southeast of Glyndon, Minnesota;
- A new project substation within the Proposed Windpark at 70th Avenue North and 120th Street North, northeast of Glyndon in Clay County, Minnesota; and
- A new switching station along the existing OTP Sheyenne-Audubon 230 kV transmission line southeast of Glyndon, Minnesota.

3. Depending on the final route for the Proposed HVTL, the transmission line will be between 9.9 and 11.5 miles long. The proposed switching station to be constructed along the existing OTP Sheyenne-Audubon 230 kV transmission line will be located at one of two alternative locations, based on the final route for the Proposed HVTL.¹

4. On September 26, 2008, the Commission issued an order that accepted the RPA as complete; authorized the Minnesota Department of Commerce, through its Office of Energy Security (OES) EFP staff, to process the application under the full review process in Minn. R. 7849.5200-.5340;² and referred the docket to the Office of

¹ Ex. 2, RPA 5; Ex. 17, Environmental Impact Statement (EIS) 6, 101.

² Now codified as Minn. R. 7850.1700-.2700.

Administrative Hearings to hold a contested case proceeding pursuant to Minn. R. Chap. 1405. This order also authorized the OES to name a public advisor in this case.³

5. The Proposed Project requires a certificate of need (CON), the Proposed Windpark requires a site permit, and the Proposed HVTL requires a route permit. The Applicant filed an application for the CON with the Commission on October 17, 2008. It was accepted as complete on January 14, 2009. The Applicant filed its application for a site permit on October 17, 2008. The Commission accepted the site permit on December 23, 2008, and issued a draft permit on that date.⁴

6. On January 21, 2009, OES issued a Notice of Public Information and Scoping Meeting to provide information to the public about the Proposed Project. The purpose of the Scoping Meeting was to receive public comment and input on the draft site permit issued by the Commission, and to take public comment and input on the scope of the environmental impact statement (EIS) that would be prepared for the applications. The public was invited to review the applications for the Proposed Project, learn more about the Commission review process, offer comments, and ask questions.⁵

7. OES staff held the public information and scoping meeting for the Proposed Project in Glyndon on Wednesday, February 4, 2009. Approximately 120 residents attended the meeting. The public comment period on the EIS scoping for the Proposed Project was open until Wednesday, February 25, 2009. Residents submitted 14 written comments to the OES. The Minnesota Department of Natural Resources (DNR) was the only government agency to submit written comments during the scoping process.⁶

8. On April 27, 2009, OES issued its EIS Scoping Decision. OES responded to the public comments on the scope of the EIS and specified the matters to be addressed in it. The EIS Scoping Decision specified that an analysis of the potential environmental and socio-economical impacts of both Applicant's preferred HVTL route (Route 1) and Applicant's alternative HVTL route (Route 2) would be performed and the EIS would also review an alternative to Route 2 that would run west of Glyndon (Route 2A).⁷

9. On July 23, 2009, the ALJ held a prehearing conference at the offices of the Commission in St. Paul, Minnesota. Appearances were made by counsel for the Applicant and counsel for OES. OES staff and Commission staff were also present. Participating by telephone was potential intervenor Kathleen Stradley.

10. On July 28, 2009, the ALJ issued a Prehearing Order, establishing a schedule and procedures for intervention, prefiled testimony, hearing, and other matters.

³ Ex. 17, EIS IX.

⁴ Ex. 17, EIS IX.

⁵ Exs. 6-7, Notices of Public Scoping Meeting.

⁶ Ex. 17, EIS 7.

⁷ Ex. 9, EIS Scoping Decision.

11. On July 31, 2009, the OES issued its notice of the availability of the draft EIS for the Proposed Project.⁸

12. The Prehearing Order specified an August 28, 2009, deadline for petitions to intervene. No petitions to intervene were filed, and Applicant is the only party to this proceeding.

13. On August 31, 2009, OES staff conducted a public information meeting at the Glyndon Community Center to obtain comments on the draft EIS. Eight members of the public made oral comments. Written comments were received through September 10, 2009.⁹

14. On September 14, 2009, Applicant filed the Prefiled Direct Testimony of Mike Beckner and Sean Flannery. Both of these witnesses testified at the hearing on October 13, 2009.¹⁰

15. On October 8, 2009, the OES issued the final EIS.¹¹

16. Notices were issued for the Proposed HTVL, as follows:

- The OES published notice of the contested case hearing in The Forum, a legal newspaper of general circulation in Clay County, Minnesota, on September 29, 2009.¹²
- The OES sent notice of the contested case hearing to the West Central Initiative, Clay County, the City of Glyndon, Glyndon Township, Moland Township, Riverton Township, and Spring Prairie Township on September 11, 2009.¹³
- The OES sent notice of the contested case to persons on the project contact list maintained by the Commission on September 10, 2009.¹⁴

17. Minn. Stat. § 216E.03, subd. 6,¹⁵ and Minn. R. 7850.2600 (previously codified as Minn. R. 7849.5330) set out the notice requirements for the contested case hearing on the routing for a proposed HTVL. The content of these notices fully complied with Minn. R. 1405.0500 and the applicable rules and statute.

⁸ Exs. 12, 13, Notices of Availability of Draft EIS.

⁹ Ex. 17, EIS 112.

¹⁰ Ex. 1, Beckner Prefiled Direct Testimony; Ex. 3, Flannery Prefiled Direct Testimony.

¹¹ Ex. 17, EIS.

¹² Ex. 16, Notice of Public Hearing with Affidavit of Publication.

¹³ Ex. 15, Notice of Public Hearing with Certified Letters to Local Governments.

¹⁴ Ex. 14, Notice of Public Hearing with Affidavit of Service.

¹⁵ Minnesota Statutes are cited to the 2008 edition.

General Description of the Proposed Windpark

18. The proposed project area (Proposed Project Area) is located in Clay County, Minnesota, approximately two miles north of the city of Glyndon and approximately 10 miles northeast of the city of Moorhead.¹⁶

19. The Proposed Project Area covers approximately 20,000 acres comprising portions of 40 sections of land and 55 residential structures. All but two of the residences are participating in the Proposed Project by contracting with Noble for the siting of wind turbines on their land. Wind turbines are set back at least 700 feet from any participating residence. Based on the initially proposed layout of turbines, the nearest nonparticipating residence within the Proposed Project Area is approximately 1,200 feet from the nearest turbine. The average distance from a residence is approximately 3,000 feet.¹⁷¹⁸

20. The Proposed Windpark would include up to 134 General Electric 1.5 MW, 60 hertz wind turbines to achieve the stated nameplate generating capacity of 201 MW. Supporting infrastructure would also be constructed within the Proposed Project Area.¹⁹

Detailed Description of the Proposed HVTL

21. The Proposed HVTL will conform to all applicable local, state, and North American Electric Reliability Corporation (NERC) standards regarding clearance to the ground, crossing utilities and buildings, strength of materials, and right-of-way widths. The Proposed HVTL will be designed to comply with applicable local and state codes and NERC standards. Appropriate standards will be met for construction and installation, and all applicable safety procedures will be followed during and after installation. This includes clear signage during all construction activities.²⁰

22. The Proposed HVTL will be equipped with protective devices to safeguard the public if an accident were to occur and a structure or conductor on the transmission line were to fall to the ground. The protective devices are breakers and relays located where the line connects to the substation. This equipment would de-energize the transmission line should an event such as this occur.²¹

23. Two pole H-frame structures are typical for 230 kV HVTL construction and would be used for the majority of the Proposed HVTL. Where conditions warrant, single-pole structures may be used. Single-pole structures may be used in areas where the available right-of-way is limited, such as along roads in developed areas or where

¹⁶ Ex. 17, EIS XI.

¹⁷ Ex. 17, EIS X, October 26, 2009.

¹⁸ Noble Response October 26, 2009, at 2.

¹⁹ Ex. 17, EIS XI.

²⁰ Ex. 2, RPA 32; Ex. 17, EIS 58.

²¹ Ex. 2, RPA 33; Ex. 17, EIS 58.

landowner concerns preclude additional right-of-way. Single-pole structures would also be used where the HVTL is double-circuited with existing utility lines.²²

24. The H-frame structures are 70 to 90 feet tall and are placed every 600 to 1,000 feet. The single-pole structures for a single-circuited line are 80 to 100 feet high with 300 to 600 feet between structures. The single-pole structures for a double-circuited line are 95 to 115 feet high with 300 to 800 feet between structures.²³

25. The total route width requested by the Applicant for the Proposed HVTL is 300 feet. The actual right-of-way will typically be 125 feet.²⁴

1) Route 1 (Preferred Route)

26. Route 1 would primarily follow roadway right-of-ways and an existing distribution line alignment. One segment of Route 1 is proposed to be placed underground at one point where Route 1 crosses the BNSF Railway.²⁵

27. Route 1 begins at the Proposed Windpark substation; runs east paralleling the 70th Avenue North right-of-way for 2.35 miles to MN Highway 9; follows the Xcel Energy 23.5 kV distribution line right-of-way just west of MN Highway 9, south for 5.0 miles, crossing the Buffalo River and U.S. Highway 10; follows MN Highway 9 right-of-way south 0.2 miles to the intersection of the line and the BNSF Railway right-of-way bored beneath the BNSF Railway for 0.15 miles where segment 1-4 of the line would be; and follows the MN Highway 9 right-of-way south for 3.7 miles to the point of interconnection with the OTP Sheyenne-Audubon 230 kV transmission line located on the north side of 50th Avenue South (County State Aid Highway (CSAH) 12).²⁶

28. To reduce the impact of Route 1 on residences, the Proposed HVTL would be located on the west side of MN Highway 9 from 70th Avenue North to the BNSF Railway; on the east side of MN Highway 9 from the BNSF Railway to Boutons Addition; and on the west side of MN Highway 9 from Boutons Addition to the point of interconnection with the OTP Sheyenne-Audubon 230 kV transmission line.²⁷

2) Route 2

29. Route 2 is situated to the west of Route 1. Route 2 is proposed to follow, in part, the former BNSF Railway right-of-way. Route 2 would run through the city of Glyndon.²⁸

30. Route 2 begins at the Proposed Windpark substation; runs southwest following the former BNSF Railway right-of-way for 2.0 miles where it meets and runs

²² Ex. 2, RPA 13; Ex. 17, EIS 50.

²³ Ex. 2, RPA 13.

²⁴ Ex. 17, EIS 51.

²⁵ Ex. 17, EIS 51.

²⁶ Ex. 2, RPA 17.

²⁷ Transcript (Tr.), Vol. 1 at 26-27, (Beckner).

²⁸ Ex. 17, EIS 2-3.

parallel to 110th Street North for 2.1 miles, crossing the Buffalo River to where it crosses 15th Avenue North (County Road (CR) 84); from the crossing of 15th Avenue North it follows the former BNSF Railway right-of-way south for approximately 1.0 mile through the city of Glyndon, crossing U.S. Highway 10; it then runs east out of Glyndon for approximately 0.7 miles along the existing BNSF Railway right-of-way; it then runs cross-country for approximately 0.3 miles until it reaches the intersection of 7th Street Southeast and 110th Street South (CR 71); it then runs south paralleling the 110th Street South (CR 71) right-of-way for approximately 1.6 miles to where it intersects the former BNSF Railway right-of-way; it then follows the former BNSF Railway right-of-way southeast for 2.2 miles to the point of interconnection with the OTP Sheyenne-Audubon 230 kV transmission line located on the north side of 50th Avenue South (CSAH 12).²⁹

2) Route 2A

31. Route 2A is an alternative to the segment of the Route 2 alignment that passes through the City of Glyndon. The alternative segment avoids passing through the downtown area of Glyndon to minimize visual impact to residences and businesses within the city limits.³⁰

32. Route 2A would deviate from Route 2 approximately 0.1 miles west of the intersection of 110th Street North (CSAH 19) and 15th Avenue North (CR 84). This is approximately 0.5 miles south of where Route 2 crosses the Buffalo River along 110th Street North (CSAH 19) and approximately 0.5 miles north of where Route 2 would enter the city limits of Glyndon. The Route 2A alignment would proceed west from the intersection of 110th Street North (CSAH 19) and 15th Avenue North (CR 84) for approximately 0.5 miles to 100th Street North and proceed south for one mile. Route 2A would need to be located on the east side of 100th Street North to avoid two existing farms on the west side of the road. Route 2A would then continue south and cross U.S. Highway 10 and an intermittent stream. South of U.S. Highway 10, Route 2A would follow 100th Street South (CSAH 17) for approximately 1.25 miles. This road, 100th Street South (CSAH 17), comprises the western boundary of the city limits of Glyndon. Route 2A would be located on the east side of 100th Street South (CSAH 17) to avoid an existing residence on the west side of the road. Approximately 0.25 miles south of 12th Avenue South, Route 2A would turn east. At this point, the HVTL would be located along the southern boundary of the Glyndon city limits. Route 2A would travel east for approximately 0.5 miles to the center of the section, where it would encounter the former BNSF Railway right-of-way. Route 2A would travel southeast for approximately 1.0 miles where it would rejoin Route 2.³¹

Applicable Statutory and Rule Considerations for HVTL Routes

33. Minn. Stat. § 216E.03, subd. 7(b), requires the Commission to facilitate the study, research, evaluation, and designation of routes by considering the following twelve factors:

²⁹ Ex. 2, RPA 18.

³⁰ Ex. 17, EIS 50.

³¹ Ex. 17, EIS 3.

- a. Evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;
- b. Environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;
- c. Evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;
- d. Evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;
- e. Analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;
- f. Evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;
- g. Evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivisions 1 and 2;
- h. Evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;
- i. Evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;
- j. Evaluation of the future needs for additional high voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;
- k. Evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and
- l. When appropriate, consideration of problems raised by other state and federal agencies and local entities.

34. The RPA and the EIS each contain adequate information to allow the Commission to address the considerations enumerated in Minn. Stat. § 216E.03, subd. 7(b).

35. Minn. R. 7850.4000 requires the Commission to issue a HVTL route permit when it finds that the facility is consistent with state goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electrical energy security through efficient, cost-effective power supply and electric transmission infrastructure.³²

36. As discussed above, Minn. Stat. § 216E.03, subd. 7(b) sets out the considerations for the Commission in the evaluation and designation of sites and routes. Minn. Rule 7850.4100 implements the above statutory requirements by establishing fourteen categories of considerations to guide the Commission in assessing the adequacy of site applications. Because the rules are more specific than the statute, the rule structure will be used in assessing both the statutory and rule requirements. Each category will be addressed individually below. Additionally, Minn. R. 7850.4300 absolutely prohibits the routing of HVTLs through wilderness areas and only allows routing through state or national parks or state scientific and natural areas under limited circumstances.

Summary of Public Comments

37. In this matter, public comment was received for all three dockets relating to the Proposed Project. Many comments relate to each part of the Proposed Project. Seven members of the public testified at the two public hearings in this matter. Three written comments were received. The comments fall into general areas, summarized below.

Noise

38. Natalie Herzog, a homeowner in Glyndon, objected to the potential increase in noise coming from turbines in the Proposed Plant. She stated that:

The World Health Organization recommends 30 decibels for a good night sleep, but yet the State of Minnesota feels it's okay to have almost twice that limit of 50 decibels for a good night sleep. ... We just feel that 50 decibels is too loud. That's more like an industrial setting instead of a rural countryside setting.³³

39. Noble estimated that the closest turbine to a nonparticipating landowner's residence was approximately 1,200 feet.³⁴ From nonparticipating landowner's property lines, each turbine will have a minimum setback of 5 rotor diameters (approximately 1,265 feet) on the prevailing wind axis and 3 rotor diameters (approximately 759 feet)

³² See *also* Minn. Stat. § 216E.03, subd. 7(b).

³³ Transcript (Tr.) Volume (Vol.) 2 (evening hearing) at 30.

³⁴ Tr. Vol. 1 (afternoon hearing), at 31 (Beckner); Noble Response at 2.

on the non-prevailing wind axis.³⁵ Noble noted that turbines cannot be located closer than 500 feet to a residence and that distance must be increased where needed to meet the applicable noise standard established by the MPCA. Noble noted that Paragraph III.E.3 of the Draft Site Permit for the Proposed Windpark provides in pertinent part:

The wind turbine towers shall be placed such that the Permittee shall comply with noise standards established as of the date of this Permit by the Minnesota Pollution Control Agency at all times at all appropriate locations. The noise standards are found in Minnesota Rules Chapter 7030. Turbines shall be moved or modified or removed from service if necessary to comply with this condition.³⁶

40. Lanny Baer, a homeowner in Glyndon, maintained that the noise generated by wind turbines amounted to a health impact on nearby residents through “noise annoyance” and the impact of low frequency noise.³⁷ Mr. Baer offered a study of the Noble windpark in Ubly, Michigan, suggesting that wind turbines are noisier than the level indicated by the Applicant.³⁸ He also provided a proposal from Noise-Con 2008 regarding the manner in which low frequency noise from wind generators should be addressed.³⁹

41. In response to these concerns regarding the cumulative noise impact of wind turbines, Noble indicated that:

The initial noise information that was used for the route -- excuse me, the site permit application, used some simple noise information from the turbine technology and the turbine manufacturer. The subsequent noise modeling that's being conducted right now is a more detailed model that takes into account the number and location of turbines in relation to known receptors in the project area, as well as topographic features that might impact noise propagation, and takes sort of a worst case approach to modeling those noises so the turbine is operating at maximum capacity and some other details of the model that essentially make it a worst case scenario for noise propagation within and around the project.⁴⁰

42. Regarding low frequency noise, Noble indicated that modeling would be done using the dBC scale (that measures lower frequency sound).⁴¹ Noble noted that the worst case scenarios are compared to the noise standards set by the Minnesota Pollution Control Agency to determine if any alteration is needed to comply with the

³⁵ Noble Reply, October 30, 2009, at 1-2.

³⁶ *Id.*

³⁷ Baer Comment Attachment, Summary of Recent Research on Adverse Health Effects of Wind Turbines, Sections 3 and 4.

³⁸ Tr. Vol. 2, at 91; Baer Comment Attachment, 2006 Baseline Noise Study for Residents for Sound Economics and Planning.

³⁹ Baer Comment Attachment, Noise-Con 2008, Simple guidelines for siting wind turbines to prevent health risks.

⁴⁰ Tr. Vol. 1, at 45 (Flannery).

⁴¹ Tr. Vol. 2, at 97 (Flannery).

applicable standards for each turbine location. Where the results of the modeling indicate noise is potentially in excess of the standard, setbacks from residences or other buildings would be increased.⁴²

43. Approximately 10 homes and a small village will be surrounded by wind turbines.⁴³ Mr. Baer requested that baseline noise studies be conducted prior to construction and that set-backs from residences be increased to take into account the cumulative impact of all surrounding wind turbines.

44. In light of recent studies, including “Public Health Impacts of Wind Turbines,” prepared by the Minnesota Department of Health, May 22, 2009,⁴⁴ the Commission may wish to consider increasing the distance that a wind turbine may be placed from a residence to reduce or eliminate low frequency noise, or introduce vegetative or other barriers. The Pollution Control Agency’s noise standards (a decibel exceedance standard) do not fully account for low frequency noise. The EIS discusses the Department of Health Study and suggests that additional mitigation should be addressed in the permitting process.⁴⁵

Shadow Flicker

45. The rotation of the wind turbine propellers in the sunshine can create a rapid repetition of shadows, known as “shadow flicker.” Noble noted that shadow flicker results when the rotating blade passes between a receptor and the sun. The shadow cast is intermittent, viewed as the blade passes.⁴⁶

46. Noble did not cite any studies that considered the impact of shadow flicker on people or farm animals.⁴⁷

47. On shadow flicker, the EIS states that “A 200 MW LWECS [Large Wind Energy Conversion System] would impair visibility and cause shadow flicker to some degree.”⁴⁸ As to mitigation of this impact, the EIS states:

Mitigation of visibility impairment and shadow flicker is best accomplished by remotely locating the LWECS. IF possible the LWECS would be located far from pristine areas such as National Parks, State Parks, wildlife areas, wetlands, etc. However, due to the relatively large overall project area required for a windpark it may not be possible to avoid locating the LWECS near parks or scenic natural areas. The turbines would likely be designed with a uniform off-white color to help the turbines of the LWECS blend in with the horizon. Visual and shadow flicker

⁴² Tr. Vol. 1, at 46 (Flannery).

⁴³ Ex. 17, EIS at Figure 7.

⁴⁴ Ex. 17, EIS at Appendix B.

⁴⁵ Ex. 17, EIS at 44-48, 53.

⁴⁶ Ex. 17, EIS at 14; Tr. Vol. 1, at 45 (Flannery).

⁴⁷ Tr. Vol. 1 at 44-45 (Flannery).

⁴⁸ Ex. 17, EIS 14.

impacts would be minimized or mitigated through setbacks to individual residences, farmsteads or roads.⁴⁹

48. Noble expressed its opinion that the shadow cast would not actually diminish the amount of light falling on a field or a yard or any particular area.⁵⁰

49. The Minnesota Department of Health Study, “Public Health Impacts of Wind Turbines,” states

Modeling conducted by the Minnesota Department of Health suggests that a receptor 300 meters perpendicular to, and in the shadow of the blades of a wind turbine, can be in the flicker shadow of the rotating blade for almost 1 ½ hour a day. At this distance a blade may completely obscure the sun each time it passes between the receptor and the sun. With current wind turbine designs, flicker should not be an issue at distances over 10 rotational diameters (~ 1000 meters or 1 km (0.6 mi) for most current wind turbines). This distance has been recommended by the Wind Energy Handbook (Burton et al., 2001) as a minimum setback distance in directions that flicker may occur. . . .⁵¹

50. Increasing the required distance from turbines to residences to a minimum of 1000 meters will mitigate the effects of both low frequency noise and shadow flicker.

Affected Residences

51. Kathleen Stradley, a homeowner in the area of the Project, noted that the determination of affected residences along Route 1 did not include the 30 homes in the Boutons Addition. Noble responded that if the measurement from the centerline of the transmission route was extended a mile, more homes, including homes in Boutons Addition would have been included. Noble noted that its number of affected households is based on a lesser distance, 150 feet, from the centerline of the transmission line,⁵² a total route corridor of 300 feet.

52. Ms. Stradley questioned whether some portion of the HVTL could be buried to protect the viewshed of residential developments along the route. Noble responded that the cost of burying any portion of the HVTL increased the cost of that portion by 10 to 15 times, which would make the Project not economically viable.⁵³

⁴⁹ Ex. 17, EIS 15.

⁵⁰ Tr. Vol. 1, at 45 (Flannery).

⁵¹ Ex. 17, EIS at Appendix B at 14.

⁵² Tr. Vol. 1, at 60-61 (Beckner); Ex. 2 at 33.

⁵³ Tr. Vol. 1, at 66-67 (Beckner).

Agricultural Land

53. As the Proposed Windpark is located entirely on agricultural land, questions were raised as to how much agricultural land would be occupied by the Proposed Windpark. Regarding this issue, Noble stated:

As stated in the Site Permit Application and the Environmental Impact Statement (EIS), the Project facilities would remove approximately 65 acres of farmland from production. This calculation included the permanent impact areas at each turbine location, the permanent access roads, and the substation/operations and maintenance building. Upon further review, it appears that the area to be removed by the substation may have been underestimated by 0.5 acres and the area to be removed by the transmission line switching station was not included in the acreage total that the State noted in the EIS. With these minor adjustments, Noble estimates that the total area of impact from all the project facilities will remove approximately 71.5 acres of farmland from production. As noted in the table below, during construction of the Project, approximately 570.5 acres of land will be disturbed — 499 acres of which will be restored and returned to previous agricultural use.⁵⁴ [Noble's table is reproduced at Finding 137, below]

Water Issues

54. Lanny Baer noted that each turbine contains significant amounts of oil and he expressed concern that, because of the high water table, spills could affect the groundwater in the area. Natalie Herzog submitted a news item that noted contamination of a well by mineral oil from a transformer that exploded.⁵⁵ Noble noted that no turbine goes deeper than ten feet, and that ground water would not be affected at this depth. Noble acknowledged that each turbine contains "less than three gallons of hydraulic oil that operates secondary [braking] system of the turbine, approximately 100 gallons of gear oil for lubricating the gear box ... transformers at the base of each turbine contain approximately 460 gallons of mineral oil serving as coolant in a closed system."⁵⁶

55. Noble noted that the Proposed Project would be required to operate under an EPA-mandated spill prevention control and countermeasures plan. This plan is developed by Noble and overseen by the Minnesota Pollution Control Agency.⁵⁷

56. Natalie Herzog, expressed concern over the potential impact of displacing standing water in the fields where the wind turbines are to be located.⁵⁸ The displacement of water would only occur in the volume occupied by the base of each

⁵⁴ Noble Reply, at 3-4.

⁵⁵ Herzog Comment, Attachment K.

⁵⁶ Tr. Vol. 2, at 27 (Birkholz).

⁵⁷ Tr. Vol. 2, at 25 (Flannery).

⁵⁸ Tr. Vol. 2, at 29.

turbine to the water level in that particular field. Donna Baer raised similar questions, noting that significant amounts of concrete were required for each turbine.⁵⁹ Noble indicated that appropriate permits would be obtained when the Proposed Project entered the construction phase.⁶⁰

Wind Data

57. Natalie Herzog noted that Noble described its data for wind patterns as developed over a five-year period, but that documents from the Clay County Planning Commission that Noble began collecting onsite data on October 21, 2008.⁶¹ Noble responded that with the combination of meteorological towers in place for two years and the data from the Fargo airport, Noble has reliable wind data for 20 years.⁶²

Prairie Chicken Habitat and Bird and Bat Surveys

58. Ms. Stradley noted that there had been a recommendation for studying the winter and spring habits of the Greater Prairie Chicken. She noted that a large number of Prairie Chickens were frequently observed in her yard. Ms. Stradley urged that the potential impact on these birds be studied, for a distance of 1.5 miles from the centerline, along the length of the proposed route.⁶³ Mr. Stradley questioned whether the EIS assessed the year-round impact on prairie chicken habitat.⁶⁴ Donna Baer expressed concern over migratory bird impact and the possibility of collisions with turbine blades.⁶⁵

59. Noble noted that its initial planning was coordinated with several different departments within the DNR, and it incorporated DNR's habitat and breeding habitat data into its selection of the Project Area.⁶⁶ No specific studies were done by Noble regarding this species, but the location of the Windpark was significantly modified to address the concerns raised by the DNR and the Nature Conservancy.⁶⁷

60. Noble received recommendations from the U.S. Fish and Wildlife Service and the Nature Conservancy regarding local resources, including information about birds and other wildlife. Initially, the DNR had suggested that Noble survey residents about the Prairie Chicken Habitat, but the Project was moved to the west and no survey of residents was conducted.⁶⁸

⁵⁹ Tr. Vol. 2, at 65.

⁶⁰ Tr. Vol. 2, at 73-74 (Birkholz).

⁶¹ Tr. Vol. 2, at 29.

⁶² Tr. Vol. 2, at 31-32 (Beckner).

⁶³ Tr. Vol. 1, at 62-63.

⁶⁴ Tr. Vol. 2, at 45-46.

⁶⁵ Tr. Vol. 2, at 62-63.

⁶⁶ Tr. Vol. 1, at 63-64 (Flannery); Tr. Vol. 2, at 46 (Flannery).

⁶⁷ Tr. Vol. 2, at 54-55 (Beckner).

⁶⁸ Tr. Vol. 1, at 65 (Flannery).

61. Noble conducted spring and fall avian migration studies and a bat acoustical study. It provided the data to OES to assist in preparation of the EIS.⁶⁹ No significant concerns were identified.⁷⁰

Financial Issues

62. Mr. Baer maintained that Noble does not have a good financial reputation, citing liens on property relating to a wind park project in the State of New York. Mr. Baer maintained that the company was under investigation for its activities in New York and he expressed his hope that "the State of Minnesota will follow through with that to protect us as citizens here" Particularly, Mr. Baer expressed concern that liens filed against Noble in Minnesota could affect farmers who have Noble wind turbines on their property.⁷¹

63. Scott Stradley inquired as to whether Noble would be regulated regarding rate of return, required to post a bond, and what taxes would be levied on the Proposed Project.⁷² Mr. Stradley also inquired as to the amount of any subsidy Noble was expecting from the Federal government and what Noble's plan was after any such subsidy expired.⁷³

64. Noble responded that it could not be certain that the Proposed Project would be profitable without the production tax credit and investment tax credit. Noble noted that "the amount [of the subsidy] is significant to the profitability of these projects and part of the reason the government subsidizes [them], to spur renewables around the United States."⁷⁴ Regarding its financial stability, Noble stated:

Noble is appropriately capitalized to reach its business goals and is majority owned by JP Morgan with approximately \$600 million invested into the company. In addition, it is important to recognize that each Noble project is individually financed ensuring that each project will be evaluated on its own economic merits. Noble is confident that the Flat Hill Project will be attractive to capital investment. Noble would not be pursuing this development if it believed otherwise.⁷⁵

65. Regarding the liens, Noble stated that "it is important to understand that cost disputes with contractors on significant construction projects, while unfortunate, are common." At the Public Hearing, Noble described the lien issue as follows:

One thing to keep in mind, the size and the scope of these projects is -- it's -- they're very large projects. There's a lot of moving pieces. It's not uncommon to have cost disputes when you're dealing with a hundred

⁶⁹ Tr. Vol. 2, at 68-69 (Flannery).

⁷⁰ Tr. Vol. 2, at 74-75 (Birkholz).

⁷¹ Tr. Vol. 2, at 19.

⁷² Tr. Vol. 2, at 37.

⁷³ Tr. Vol. 2, at 38.

⁷⁴ Tr. Vol. 2, at 45 (Beckner).

⁷⁵ Noble Reply, at 3.

contractors, and a lien is typically the way a contractor responds, and those liens are removed once you settle the cost disputes.⁷⁶

66. Regarding the specific project at issue in this proceeding, Noble stated that: "In Noble's case, (1) there are no construction related liens remaining; (2) Noble has bonded over liens where appropriate; and (3) Noble is not aware of any financial impairment to any landowner in any of Noble's projects as a result of the liens."⁷⁷

Financial Issues – Local Government Tax Revenues

67. Jon Evert, Clay County Commissioner, expressed concern that the local units of government (particularly the School District and the County) would not see a net increase in revenue. Commissioner Evert indicated that this could be the result if the State offset the production tax revenue due to the local units against existing state-aid payments.⁷⁸

68. The total tax revenue amount was derived from \$.0012 per kilowatt hour production tax and the projected production of kilowatt hours from the Proposed Windpark. The actual amount of tax revenue is dependent on the actual sales of electricity.⁷⁹ Noble estimated that the tax revenue could total \$800,000 per year of operation.⁸⁰ Noble was not aware of any offsets against production tax revenue that would reduce the amount of revenue received by school districts or county government.⁸¹

Catastrophic Failure

69. Natalie Herzog included news reports regarding the collapse of a wind turbine tower in New York State. Ms. Herzog questioned whether the proposed setbacks were adequate to protect residences from debris in the event of a turbine tower collapse.⁸²

70. Noble responded to this comment, stating:

In her comments, Ms. Herzog notes that Noble's Altona Windpark in New York experienced a turbine collapse in March 2009 and expresses a concern that the proposed setbacks from houses of at least 700 feet may not be sufficient to protect landowners. Noble appreciates Ms. Herzog's concerns. However, it is important to view this extremely rare and unfortunate incident in context.

⁷⁶ Tr. Vol. 2, at 22-23 (Beckner).

⁷⁷ Noble Reply, at 3.

⁷⁸ Tr. Vol. 2, at 78-81.

⁷⁹ Tr. Vol. 2, at 41-43 (Beckner).

⁸⁰ Tr. Vol. 2, at 79 (Beckner).

⁸¹ Tr. Vol. 2, at 80 (Beckner).

⁸² Herzog Comment Letter, at 2; Herzog Comment Attachment H.

Initially, it should be understood that the collapse was an isolated incident, which Noble believes resulted from the unique combination of power loss and a wiring anomaly. An investigation of the incident determined that the farthest piece of debris from the collapsed turbine, which was identified as a piece of fiberglass, landed 345 feet from its base - well within the setback from homes proposed for the Flat Hill Windpark. The State of Minnesota's existing setback requirements have been established to ensure the safety of persons within the project area. As noted above, a requirement of the Draft Site Permit is that "Wind turbine towers shall not be located closer than 500 feet from the nearest occupied dwelling." Noble's proposed setback is a minimum of 700 feet exceeding the standard for setbacks in Minnesota.⁸³

Status of Power Purchase Agreement

71. Lanny Baer questioned where the electricity generated was going to be used, and whether it would benefit retail customers in Minnesota. Mr. Baer noted that Minnesota was already approaching the 2020 renewable energy standards. For these reasons, Mr. Baer indicated that he did not see any purpose for the Proposed Project at this time.⁸⁴

72. Natalie Herzog inquired about the status of any power purchase agreement between Noble and any utility that might sell the electricity to be generated by the Proposed Windpark.⁸⁵ Mr. Stradley questioned whether Noble had a contract with any Minnesota utility for its EPS offset.⁸⁶ He also noted that an economist recently stated that current Minnesota applications for renewable energy generation were seven times what Minnesota utilities require to meet the renewable energy standard.⁸⁷

73. Noble is a wholesale provider of electricity, not a utility, and would not be rate regulated. It acknowledged that it must have a de-commissioning plan that explains how the Project will be disposed of when it is no longer in operation. In addition, the contracts with each landowner hosting a turbine include a clause that requires removal if the turbine is not producing electricity for 365 consecutive days and Noble does not act to correct that situation.

74. Noble noted that, because the electricity generated by the Proposed Project comes from a renewable resource, it will be available to all utilities to meet the renewable energy standards. As to where the power would go, Noble stated:

So whether we execute a power purchase agreement or some other financial instrument to sell the power -- and I'm not a marketing expert, but I'm quite sure that some portion of the power will be used in Minnesota.

⁸³ Noble Reply, at 2.

⁸⁴ Tr. Vol. 2, at 17.

⁸⁵ Tr. Vol. 2, at 29.

⁸⁶ Tr. Vol. 2, at 37.

⁸⁷ Tr. Vol. 2, at 38.

As far as how much, as far as what locations, there's really no way for me to tell. But I certainly wouldn't anticipate that all of this power will be going outside of the state or somewhere else.⁸⁸

75. Noble indicated that, as of the time of the hearing, no Power Purchase Agreement has been negotiated for the electricity to be produced by the Proposed Windpark, but there will be a plan for the physical delivery and sale of that electricity before construction begins. Noble noted that, based on the Midwest Independent System Operator (MISO) tariff, once an interconnection agreement is executed, Noble will be able to physically deliver and sell the power directly into the MISO pool. Noble estimated that the interconnection agreement would be completed in the spring of 2010.⁸⁹

Route Specific Comments

76. Mr. Baer noted that Noble had expressed a goal of selecting the shortest route, but that the Applicant's preferred route was the longest route.⁹⁰

77. Noble explained its preference for Route 1:

To reiterate, the majority of Route 1 would be located adjacent to or within the State Highway 9 corridor and has been routed to minimize impacts to residences along or near the route. For instance, to minimize the impact on residents of the Boutons Addition, Route 1 will pass the Addition on the other side of the Highway 9, resulting in a set back of at least 250 feet from any Boutons Addition residence.

Noble believes that Route 1 is superior to Routes 2 and 2A because Route 1 is wholly within existing right-of-way. Furthermore, the impact of Route 1 is lessened because almost half of Route 1 will be located in the same location as an existing Xcel Energy distribution line. Routes 2 and 2A cause disruption in existing agricultural areas, are located adjacent to remnant native prairie, and introduce new crossings of the Buffalo River. Route 2 has the further disadvantage that it will be highly disruptive to the city of Glyndon and residences within that city. For these and other reasons, Route 1 has gained community acceptance and should be approved by the Public Utilities Commission.⁹¹

⁸⁸ Tr. Vol. 2, at 20-21 (Beckner).

⁸⁹ Tr. Vol. 1, at 32 (Beckner).

⁹⁰ Tr. Vol. 2, at 18 (Beckner).

⁹¹ Noble Reply, at 5.

Analysis of Factors for HVTL Routes

A. Effects on Human Settlement, Including, but Not Limited to, Displacement, Noise, Aesthetics, Cultural Values, Recreation, and Public Services (Minn. R. 7850.4100.A)

78. Minn. R. 7850.4100 A. requires the Commission to consider effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services.

1. Displacement

Route 1

79. All homes along Route 1 are greater than 100 feet from the Proposed HVTL.⁹²

80. No homes or businesses would be displaced by building the Proposed HVTL on Route 1.⁹³

Route 2

81. One home and two businesses along Route 2 are within 50 feet of the Proposed HVTL and would be displaced unless the route is altered.⁹⁴

Route 2A

82. Route 2A would bypass the city of Glyndon and could avoid the displacement of residences that might be displaced by Route 2.⁹⁵

83. Route 1 and Route 2A are superior because neither one displaces any homes. Route 2 will cause displacement.

2. Community Benefits

Economic Benefits

84. The Proposed Project will have a positive impact on economic development. The local property taxes generated from the operation of the Noble Flat Hill Windpark I through the state production tax are estimated to be over \$800,000 per year. The HVTL proposed by the Applicant is necessary to convey the power from this wind project to the grid. The Proposed Project may also encourage the development of

⁹² Ex. 17, EIS 42.

⁹³ Ex. 17, EIS 43.

⁹⁴ *Id.*

⁹⁵ Ex. 17, EIS 43, 100.

wind-related businesses in the area, and thus contribute to economic growth in the region.⁹⁶

85. Temporary jobs would be available during construction of the Proposed Project, including the Proposed HVTL. The influx of project construction workers purchasing local goods and services will create a short-term increase in revenue for local businesses.⁹⁷

86. Applicant has successfully obtained all necessary right-of-way agreements with landowners along Route 1 and could meet the proposed in-service date. Obtaining additional easements for Route 2 or Route 2A could cause a delay in the in-service date and delay the tax revenue.⁹⁸

87. The Proposed Project will not create disproportionately high or adverse effects on low income populations.⁹⁹

88. The Applicant has shown that the Proposed Project will contribute to employment, tax base, and economic development. Applicant's preferred Route 1 will avoid delay to the in-service date of the Proposed Project. Selection of Route 2 or Route 2A may create the risk of such delays.

3. Noise

89. The ionization of moist air near transmission lines, known as corona, has the potential to generate electromagnetic noise, especially in foggy, rainy, and wet conditions. However, if any noise occurs along the Proposed HVTL, all noise is expected to be below 50 dB(A), the most restrictive state nighttime standard.¹⁰⁰

90. During a heavy rain, background noise would generally be greater than transmission line noise.¹⁰¹

91. During dry weather, noise from the Proposed HVTL could be faintly audible or inaudible (less than 20dB(A), which is comparable to the level of a whisper).¹⁰²

92. Noise from the Proposed HVTL on Route 1 would likely blend in with existing traffic noise on MN Highway 9.¹⁰³

93. Noise from the Proposed HVTL on Route 2 would likely blend in with existing agricultural and urban noise.¹⁰⁴

⁹⁶ Ex. 2, RPA 41; Ex. 17, EIS 66.

⁹⁷ Ex. 17, EIS 67.

⁹⁸ Tr. Vol. at 29, (Beckner); Ex. 2, RPA 14, 70.

⁹⁹ Ex. 17, EIS 41.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

94. Although substation transformers will generate noise, the noise is generally minimal and the substation is surrounded by rural land, with the nearest noise receptor being more than 3,280 feet away.¹⁰⁵

95. No transformers are planned at the switching station; therefore, noise produced from the operation of the switching station under normal conditions would be inaudible beyond the fence line.¹⁰⁶

96. Two parcels will be acquired to accommodate the 2.5 acre substation and the 6-acre switching station. The Applicant indicated that the size of the acreage acquired will allow for a buffer area between the electrical equipment and the adjacent properties. This additional distance is expected to limit noise impact from the additional facilities.¹⁰⁷

97. No issues were raised regarding the potential for noise impact from the Proposed HVTL. The Proposed HVTL and associated facilities are not anticipated to have significant noise impacts. Any noise generated by the Proposed HVTL would be below state noise standards.

4. Traffic Impact During Both Construction and Operation

98. Any traffic disruption associated with the construction of the Proposed HVTL would be localized for short, temporary periods during construction. There is no significant impact anticipated on roadway traffic from construction of the HVTL for any of the route alternatives.¹⁰⁸

99. No significant traffic impact is anticipated. The only potential for traffic impact arises during construction and would be of short duration.

5. Aesthetics

100. The HVTL, substation, and switching station for all route alternatives will be visible from roadways and some residences and businesses near these facilities. Buffer areas will be used around the substation and switching station to limit aesthetic impacts from these facilities.¹⁰⁹

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ Ex. 2, RPA 35; Ex. 17, EIS 47.

¹⁰⁷ Ex. 2, RPA 35; Ex. 17, EIS 63.

¹⁰⁸ Ex. 17, EIS 63.

¹⁰⁹ Ex. 2, RPA 40.

Route 1

101. Applicant's preferred Route 1 minimizes additional visual impact on the agricultural landscape by following existing road corridor for 100 percent of the HVTL, including 70th Avenue North and MN Highway 9.¹¹⁰

102. Applicant's preferred Route 1 minimizes additional visual impact by co-locating with an existing Xcel Energy 23.5 kV distribution line for approximately 5 miles of the 11.5-mile long route.¹¹¹

103. Visual impact to residences in Boutons Addition will be mitigated by Applicant's agreement to move the Proposed HVTL to the west side of MN Highway 9 in the vicinity of Boutons Addition. Consequently, all homes in Boutons Addition will be 250 feet or more from the Proposed HVTL.¹¹²

104. Applicant's preferred Route 1 would be more than one mile from Buffalo River State Park and any land owned by The Nature Conservancy, with the exception of the quarter section of The Nature Conservancy land adjoining Boutons Addition where the boundary would come within one-half mile of Route 1.¹¹³

Route 2

105. Route 2 would impose a visual impact on the residents of the City of Glyndon and would cross agricultural areas.¹¹⁴

106. Route 2 would result in a total HVTL length of 9.9 miles, which is less than the Applicant's preferred Route 1 length of 11.5 miles. However, Route 2 would require approximately 4.8 miles of new right-of-way where the route does not parallel existing road or railroad corridors.¹¹⁵

Route 2A

107. Route 2A would avoid the City of Glyndon, but it would cross additional agricultural area.¹¹⁶

108. Route 2A would increase the total length of the HVTL to 10.5 miles, which is less than the Applicant's preferred Route 1 length of 11.5 miles. However, Route 2A would require approximately 4.8 miles of new right-of-way where the route does not parallel existing road or railroad corridors.¹¹⁷

¹¹⁰ Ex. 17, EIS 51, 101.

¹¹¹ Ex. 2, RPA 17; Ex. 17, EIS 65.

¹¹² Tr. Vol. 1 at 27, (Beckner).

¹¹³ Tr. Vol. 2 at 57, (Flannery); Ex. 2, RPA 42; Ex. 17, EIS 59.

¹¹⁴ Ex. 17, EIS 50.

¹¹⁵ Ex. 2, RPA 20; Ex. 17, EIS 50, 101.

¹¹⁶ Ex. 17, EIS 50.

¹¹⁷ Ex. 17, EIS 101.

109. Applicant's proposed Route 1, by following existing road and distribution line rights-of way and avoiding the City of Glyndon, has the lowest visual and aesthetic impact of the three routes.

6. Cultural Values

110. The Clay County Community-Based Comprehensive Plan (Comprehensive Plan) was used to identify key community values and community land use goals. The Comprehensive Plan identified commercial development of wind energy as an opportunity for Clay County, and cited a survey of farmers conducted by the Minnesota Project in 1995 that showed nearly unanimous support for wind development, both for environmental benefits and rural economic development.¹¹⁸

111. The Comprehensive Plan also highlighted that Clay County already participated in the wind energy field by hosting wind farms and transmission lines, including wind turbines in the City of Moorhead and three 750 kW turbines operating in rural Clay County on the western edge of Keene Township.¹¹⁹

112. All of the alternatives for the HVTL are consistent with the goals and policies in the Clay County Comprehensive Plan that relate to the environment, natural resources, and economic development.

7. Recreation

113. The Proposed HVTL would not cross the Buffalo River State Park, the Bluestem Prairie Scientific and Natural Area (SNA) owned by The Nature Conservancy, any DNR wildlife management area, any U.S. Fish and Wildlife Service lands, or any other publicly administered recreational land. Therefore, no direct impact is anticipated to these areas.¹²⁰

114. The Proposed HVTL would cross the Buffalo River regardless of which route alternative is selected. The Proposed HVTL would likely be visible, depending on the amount of tree canopy at the proposed crossing area, by people canoeing or fishing on the Buffalo River.¹²¹

115. Applicant's preferred Route 1 would not introduce a new crossing of the Buffalo River. Both Route 2 and Route 2A would result in a new crossing.¹²²

116. As noted, Applicant's preferred Route 1 would be more than one mile from Buffalo River State Park and for the most part more than one mile from any land owned by The Nature Conservancy.¹²³

¹¹⁸ Ex. 2, RPA 38; Ex. 17, EIS 66.

¹¹⁹ Ex. 2, RPA 38; Ex. 17, EIS 66.

¹²⁰ Ex. 17, EIS 59.

¹²¹ Ex. 17, EIS 59.

¹²² Ex. 17, EIS 84.

¹²³ Tr. Vol. 2 at 57, (Flannery); Ex. 2, RPA 42; Ex. 17, EIS 59.

117. None of the route alternatives for the HVTL will impact any land heavily used for recreation. Route 1 is superior to the alternative routes because Route 1 will not require a new crossing of the Buffalo River.

8. Public Services

118. The Proposed Project is not expected to have significant adverse effects on public services.¹²⁴

119. Traffic disruption associated with construction of the Proposed HVTL would be localized, for short periods, and is not anticipated to have a significant impact.¹²⁵

120. The Proposed HVTL will not impact public services, regardless of which route is chosen.

B. Effects on Public Health and Safety (Minn. R. 7850.4100 B)

121. Minn. R. 7850.4100 B. requires the Commission to consider effects of the Proposed HVTL on public health and safety.

1. Electromagnetic Fields

122. The EIS found that “no significant impacts on human health and safety from Electromagnetic Fields (EMFs) associated with the Proposed HVTL are anticipated.”¹²⁶

123. EMFs decrease with distance from the HVTL.¹²⁷

124. The Proposed HVTL will have a maximum magnitude of electric field density of approximately 4.66 kV/m underneath the conductors one meter above ground level, which is significantly less than the 8 kV/m guideline historically recommended by the Minnesota Environmental Quality Board and the Commission in other route permit proceedings. The 8 kV/m guideline was designed to prevent serious hazard from shocks when touching large objects like a bus or a combine parked under high voltage transmission lines, usually of 345 kV or greater.¹²⁸

125. Under the conductors of the Proposed HVTL, magnetic fields would be the strongest at 335 mG, which is less than the magnetic field of many household appliances.¹²⁹

¹²⁴ Ex. 17, EIS 52.

¹²⁵ Ex. 17, EIS 63.

¹²⁶ Ex. 17, EIS 54.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ Ex. 17, EIS 55.

126. The EIS found that “[t]here is at present insufficient evidence to demonstrate a cause and effect relationship between EMF exposure and any adverse health effects.”¹³⁰

127. There is no indication that any significant impact on human health and safety from EMFs will arise from the Proposed HVTL, regardless of which route is chosen.

2. HVTL Design and Construction

128. As described in the Application, the Proposed HVTL would conform to all applicable local, state, and NERC standards regarding clearance to the ground, clearance to utilities, clearance to buildings, strength of materials and right-of-way widths.¹³¹

129. The Proposed HVTL would include breakers and relays to de-energize the line and protect the public if a line were to fall to the ground.¹³²

130. The typical right-of-way for the HVTL would be 62.5 feet on either side of the centerline, minimizing the possibility that HVTL poles and associated equipment would be a human safety hazard.¹³³

131. Applicant’s Proposed HVTL design and construction will comply with all applicable standards and minimize the possibility of human safety hazards.

C. Effects on Land-Based Economies, Including, But Not Limited to, Agriculture, Forestry, Tourism and Mining (Minn. R. 7850.4100 C)

132. Minn. R. 7850.4100 C. requires the Commission to consider effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining.

1. Agriculture

133. The HVTL will have minimal impact on agricultural activities, temporarily during construction and permanently for placement of HVTL poles and the substation and switching station equipment.¹³⁴

134. The Applicant would compensate landowners for unavoidable crop damage and soil compaction that occurs during project construction.¹³⁵

¹³⁰ Ex. 17, EIS 56.

¹³¹ Ex. 2, RPA 32; Ex. 17, EIS 57.

¹³² Ex. 17, EIS 58.

¹³³ *Id.*

¹³⁴ Ex. 17, EIS 60.

¹³⁵ Ex. 2, RPA 43.

135. Small areas around the pole placements will be removed from agricultural production, but these will be minimized by placing poles within or adjacent to existing right-of-way wherever possible. Noble will purchase easements from landowners if pole placement and overhang easements on private land are necessary.¹³⁶

136. Route 1 would follow existing corridor and right-of-way for 100 percent of its 11.5-mile length. Approximately 4.8 miles of the 9.9 mile Route 2 alignment would be outside of existing road or railroad corridors and would therefore require new right-of-way which would bisect agricultural fields. Route 2A would require approximately 4.8 miles of new right-of-way which would bisect agricultural fields.

137. For all routes there would be an agricultural impact at the substation and switching station where agricultural land would be removed from production. The substation and switching station parcels will remove 2.5 and 6 acres of land from agricultural production, respectively. Landowners will be compensated for the sale of these parcels.¹³⁷ Noble estimated the amounts of land (of all types) affected by the Project as follows:

Facility Type	Temporary Land Disturbed during Construction (Acres)	Permanent Land Removed from Production (Acres)¹³⁸
Turbine Locations	217	24
Turbine Access Roads	196	39
Substation/O&M Building	8.25	2.5
Wind Project Electrical Collection System	109	0
HVTL Switching Station	6	6
HVTL Pole Structures	34	0
Totals	570.5	71.5

138. Regarding impact on agricultural lands, Route 1 is superior to the alternative routes since only Route 1 will follow existing corridors and right-of-way for 100 percent of its 11.5-mile length. In addition, Route 1 would not bisect any agricultural fields and will therefore minimize the effects on agricultural production. Routes 2 and 2A have more impact on agricultural production.

¹³⁶ Ex. 2, RPA 43.

¹³⁷ Ex. 2, RPA 43; Ex. 17, EIS 61.

¹³⁸ Noble Reply, at 4.

2. Forestry

139. There are no forest resources within any of the routes.¹³⁹ The Proposed HVTL would have no impact on forest resources.

3. Mining

140. There are no mining resources within any of the routes.¹⁴⁰ The Proposed HVTL would have no impact on mining resources.

D. Effects on Archaeological and Historic Resources (Minn. R. 7850.4100 D)

141. Minn. R. 7850.4100 D. requires the Commission to consider effects on archaeological and historic resources. The Applicant has reviewed available cultural resource information for the Proposed Project area and initiated consultation with the Minnesota State Historic Preservation Officer (SHPO) regarding adverse direct effects the Proposed Project may have to properties or adverse visual effects the Proposed Project may have to architectural properties in the vicinity.¹⁴¹

142. Once a final route for the transmission line is determined, the Applicant will conduct a Phase IA pedestrian survey along the final route. A Phase IA pedestrian survey has been completed along portions of Route 1. Upon completion of the Phase IA report, recommendations for subsurface testing will be made for areas of low surface visibility and/or increased potential for buried archaeological resources. In addition, a more detailed review of previously documented cultural resources and historic properties, which have not been evaluated in terms of National Register of Historic Places (NRHP) eligibility will be conducted, if necessary, and provided to the SHPO. Appropriate mitigation measures will be identified in consultation with the SHPO if impacts to archaeological or historic resources are identified.¹⁴²

Route 1

143. No archaeological sites or NRHP eligible properties have been documented within one mile of Route 1. One architectural history property, the Spring Prairie Township Hall, has been identified within 1 mile of Route 1. This property has not been evaluated for listing on the NRHP.¹⁴³

144. One new archaeological site was documented during the pedestrian survey with the finding of a portion of a projectile point. Because no additional materials

¹³⁹ Ex. 2, RPA 43; Ex. 17, EIS 65.

¹⁴⁰ *Id.*

¹⁴¹ Ex. 2, RPA 43, Ex. 17, EIS 71.

¹⁴² *Id.*

¹⁴³ Ex. 2, RPA 45; Ex. 17, EIS 69.

were found in the currently and historically cultivated field, the site is considered isolated.¹⁴⁴

Route 2

145. No properties evaluated for the NRHP have been identified within Route 2 of the Proposed Project Area. One archaeological site has been documented within one mile of Route 2. This site has not been evaluated for listing on the NRHP. A total of 13 architectural history properties have been identified within 1 mile of Route 2, primarily in the city of Glyndon. None of the 13 properties have been evaluated for listing on the NRHP.¹⁴⁵

146. The Proposed HVTL is not expected to have a significant impact on archaeological and historic resources. In the event that any such resources are identified on the approved route, the Applicants have proposed adequate mitigation. Route 2, by running through the Town of Glyndon, is closer to more architectural properties than Route 1.

E. Effects on the Natural Environment, Including Effects on Air and Water Quality Resources and Flora and Fauna (Minn. R. 7850.4100 E)

147. Minn. R. 7850.4100 E. requires the Commission to consider effects on the natural environment, including effects on air and water quality resources and flora and fauna.

1. Effects on Air

148. Temporary and localized impact on air quality is likely to occur during construction due to emissions for construction vehicles and fugitive dust from clearing activities. However, adverse impacts to the surrounding environment will be minimal and the Proposed HVTL would not impact air quality during operation.¹⁴⁶ The Proposed HVTL will not have a significant impact on air quality.

2. Effects on Water Quality

149. The EIS assessment was that the Proposed HVTL would not impact water quality.¹⁴⁷ The Applicant's preferred Route 1 will span the Buffalo River using the existing Xcel Energy right-of-way. Using the other route alternative would require a new crossing of the Buffalo River.¹⁴⁸

150. The Proposed HVTL will not have a significant impact on water quality. Route 1 is preferred because it would not introduce a new crossing of the Buffalo River.

¹⁴⁴ Ex. 17, EIS 71.

¹⁴⁵ Ex. 2, RPA 72; Ex. 17, EIS 69-70.

¹⁴⁶ Ex. 2, RPA 54; Ex. 17, EIS 74.

¹⁴⁷ Ex. 2, RPA 54; Ex. 17, EIS 76.

¹⁴⁸ *Id.*

3. Effects on Geology and Soils

151. The EIS assessment was that the Proposed HVTL would not impact geology or soils.¹⁴⁹ The proposed HVTL will not impact geology or soils.

4. Wetlands

152. The EIS assessment was that none of the route alternatives would have an impact on wetlands. When working in proximity to wetland resources that may potentially be impacted, the Applicant will complete formal wetland delineations and avoid wetlands if at all possible.¹⁵⁰ The Proposed HVTL will not impact wetlands.

5. Effects on Flora and Fauna

Route 1

153. By adhering to existing rights-of-way, no negative impacts on flora and fauna are anticipated along Route 1.¹⁵¹

154. Through the Applicant's interaction with the Minnesota Department of Natural Resources and the U.S. Fish and Wildlife Service during the siting and planning stage for the proposed project, Route 1 was sited away from intact areas of prairie, wooded, and wetland habitat.¹⁵²

155. Route 1 does not cross any prairie chicken breeding and nesting habitat.¹⁵³

156. By sharing the existing Xcel Energy distribution line, including the Buffalo River, Route 1 uses a corridor already created through the wooded area around the Buffalo River. Routes 2 and 2A would introduce new crossings over the river.¹⁵⁴

157. The Greater Prairie Chicken is a state species of special concern. The preferred habitat for these species, especially for breeding and nesting behaviors, includes native prairie and wetland habitats. The EIS found that, due to the distance between the Proposed Windpark and the preferred habitat to the east of the Proposed Project Area, habitat avoidance by the birds is not anticipated.¹⁵⁵

158. The Greater Prairie Chicken relies on a variety of seeds from native and cultivated plants, fruits and flowers during winter. The EIS found that, although some crop land will be impacted due to the Proposed Project, there is crop land available adjacent to the Proposed Project Area to provide sufficient winter feeding habitat for the

¹⁴⁹ Ex. 2, RPA 53-54; Ex. 17, EIS 76.

¹⁵⁰ Ex. 2, RPA 56; Ex. 17, EIS 80.

¹⁵¹ Ex. 2, RPA 56.

¹⁵² Ex. 2, RPA 57.

¹⁵³ Ex. 2, RPA 64.

¹⁵⁴ Ex. 17, EIS 84.

¹⁵⁵ Ex. 17, EIS 96.

greater prairie chicken. Applicant's environmental scientist testified that there is no evidence that indicates that transmission lines or wind turbine structures pose a significant concern with respect to Greater Prairie Chicken feeding behavior.¹⁵⁶

159. HVTL collision is not likely to be a significant source of mortality for these species. There is no evidence to suggest there is a concern about prairie chickens colliding with transmission lines.¹⁵⁷

160. Through early consultation with agencies and environmental groups including the Minnesota DNR, the U.S. Fish and Wildlife Service, and The Nature Conservancy, the Proposed Project was sited within the MN Highway 9 corridor and to the west to avoid sensitive areas including prairie chicken habitat to the east of this corridor.¹⁵⁸

Route 2

161. Route 2 would require introduction of a new HVTL crossing over the Buffalo River.¹⁵⁹

162. There are three segments of high quality native prairie remnant along the previous railroad corridor that could potentially be impacted.¹⁶⁰

Route 2A

163. Like Route 2, Route 2A would require introduction of a new HVTL line crossing over the Buffalo River.¹⁶¹

164. Like Route 2, Route 2A will cross three segments of high quality native prairie remnant along the previous railroad corridor that could potentially be impacted.¹⁶²

165. Route 1 is superior to the other route options because Route 1 would not create new corridors or require a new crossing of the Buffalo River. Route 1 is not anticipated to negatively impact Greater Prairie Chicken breeding, nesting, or feeding activities. Routes 2 and 2A will cross three segments of high quality native prairie remnant that could potentially be impacted.

¹⁵⁶ Tr. Vol. 2, at 48-49, (Flannery); Ex. 17, EIS unnumbered page 297 (response 4 to DNR comment letter dated September 10, 2009).

¹⁵⁷ Tr. Vol. 2, at 48-49, (Flannery); Ex. 17, EIS 96.

¹⁵⁸ Tr. Vol. 1, at 40-41, (Flannery); Tr. Vol. 2, at 53, (Flannery) at 54-55 (Beckner); Ex. 2, RPA 85; Ex. 4, Letter from The Nature Conservancy; Ex. 17, EIS 87.

¹⁵⁹ Ex. 2, RPA 76; Ex. 17, EIS 84.

¹⁶⁰ Ex. 2, RPA 77; Ex. 17 EIS 97.

¹⁶¹ Ex. 2, RPA 76; Ex. 17, EIS 84.

¹⁶² Ex. 2, RPA 77; Ex. 17, EIS 98.

F. Effects on Rare and Unique Natural Resources (Minn. R. 7850.4100 F)

166. Minn. R. 7850.4100 F. requires the Commission to consider effects on rare and unique natural resources. By utilizing existing corridors that have previously been disturbed, the Applicant's preferred Route 1 is not anticipated to impact any rare or unique natural resources. Native prairie areas will be avoided and the Proposed HVTL is not likely to impact prairie chickens or other state listed species.¹⁶³

167. The Applicant's planning for the Proposed HVTL and Windpark included consultation with the U.S. Fish and Wildlife Service, The Nature Conservancy, and the DNR ecological and state parks divisions.¹⁶⁴

168. Through early consultation with these organizations the Proposed Project was sited within the MN Highway 9 corridor and to the west to avoid sensitive areas to the east of this corridor.¹⁶⁵

169. None of the routes identified for the Proposed HVTL is anticipated to impact any rare or unique natural resources.

G. Application of Design Options that Maximize Energy Efficiencies, Mitigate Adverse Environmental Effects, and Could Accommodate Expansion of Transmission or Generating Capacity (Minn. R. 7850.4100 G)

170. Minn. R. 7850.4100 G. requires the Commission to consider application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity. By following existing rights-of-way and being co-located with an existing Xcel Energy distribution line, Route 1 mitigates adverse environmental effects.¹⁶⁶

171. The use of single-pole structures for the double-circuit portion of Route 1 will allow both the Proposed HVTL and the existing Xcel Energy distribution line to be supported by the same poles.¹⁶⁷

172. The design of Route 1 mitigates adverse environmental effects by using existing rights-of-way and providing single-pole structures for the double-circuited portion of the route. Use of either alternative route would not mitigate adverse environmental effects to the same degree as using Route 1 for the Proposed HVTL.

¹⁶³ Ex. 2, RPA 64; Ex. 17, EIS 96, 97.

¹⁶⁴ Tr. Vol. 1, at 40, (Flannery); Tr. Vol. 2, at 52-53, (Flannery); at 54-55, (Beckner); Ex. 2, RPA 85; Ex. 17, EIS 87.

¹⁶⁵ *Id.*

¹⁶⁶ Ex. 17, EIS XII.

¹⁶⁷ Ex. 17, EIS 51.

H. Use or Paralleling of Existing Rights-of-Way, Survey Lines, Natural Division Lines, and Agricultural Field Boundaries (Minn. R. 7850.4100 H)

173. Minn. R. 7850.4100 H. requires the Commission to consider use of paralleling or existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries. Route 1 is restricted to existing rights-of-ways. Routes 2 and 2A would each require new rights-of-way.¹⁶⁸

174. Route 1 is a superior route for the Proposed HVTL in comparison to Routes 2 and 2A, when considering the use of existing rights-of-way.

I. Use of Existing Large Electric Power Generating Plant Sites (Minn. R. 7850.4100 I)

175. Minn. R. 7850.4100 I. requires the Commission to consider use of existing large electric power generating plant sites. There are no existing large electric power generating plant sites in the vicinity that could be considered.

J. Use of Existing Transportation, Pipeline, and Electrical Transmission Systems or Rights-of-Way (Minn. R. 7850.4100 J)

176. Minn. R. 7850.4100 J. requires the Commission to consider use of existing transportation, pipeline, and electrical transmission systems or rights-of-way. Applicant's preferred Route 1 is co-located with an existing Xcel Energy 23.5 kV distribution line for approximately 5 miles of the 11.5-mile long route.¹⁶⁹ Either of the other two options would use less of the existing transmission right-of-way. Route 1 is a superior route for the Proposed HVTL in comparison to Routes 2 and 2A, when considering the use of existing electrical transmission systems or rights-of-way, since Route 1 is co-located with an existing electrical distribution line for almost half of its length.

K. Electrical System Reliability (Minn. R. 7850.4100 K)

177. Minn. R. 7850.4100 K. requires the Commission to consider the impact of the Proposed HVTL on electrical system reliability. The Proposed HVTL will promote electric system reliability by providing an outlet for new generating capacity.¹⁷⁰

L. Costs of Constructing, Operating, and Maintaining the Facility Which Are Dependent on Design and Route (Minn. R. 7850.4100 L)

178. Minn. R. 7850.4100 L. requires the Commission to consider costs of constructing, operating, and maintaining the facility which are dependent on design and

¹⁶⁸ Ex. 17, EIS 50, 101.

¹⁶⁹ Ex. 2, RPA 17; Ex. 17, EIS 48.

¹⁷⁰ Ex. 2, RPA 84.

route. The total estimated project cost for the Proposed HVTL is \$16.8 million for Route 1, \$14.3 million for Route 2, and \$14.3 million for Route 2A.¹⁷¹

179. Mike Beckner testified that using the shortest (and thus least expensive) route possible is tertiary to two other goals, which include utilizing existing rights-of-way and accommodating the community. He testified that, although there has been some negative feedback, the vast majority of feedback has been positive and that the Applicant has been successful in acquiring all easements needed for Route 1.¹⁷²

180. Although more expensive due to its additional length, Route 1 was chosen by Applicant as its preferred route because it utilizes existing rights-of-way and has community and landowner acceptance.

M. Adverse Human and Natural Environmental Effects Which Cannot Be Avoided (Minn. R. 7850.4100 M)

181. Minn. R. 7850.4100 M. requires the Commission to consider adverse human and natural environmental effects which cannot be avoided. The only significant unavoidable adverse impacts of the Proposed HVTL identified by the EIS are the loss of land from agricultural production and aesthetic factors.¹⁷³

182. The substation and switching station for all three routes will remove a total of 8.5 acres of land from agricultural production.¹⁷⁴

183. By being limited to existing rights-of-way, Route 1 minimizes additional agricultural and visual impacts.¹⁷⁵

184. The Applicant has shown that Route 1 is superior to the alternatives, because Route 1 minimizes unavoidable adverse effects.

N. Irreversible and Irretrievable Commitments of Resources (Minn. R. 7850.4100 N)

185. Minn. R. 7850.4100 N. requires the Commission to consider irreversible and irretrievable commitments of resources. In contrast to Route 1, Routes 2 and 2A have existing high quality native prairie remnants along the right-of-way which may be impacted by construction and placement of the poles.¹⁷⁶ Route 1 has been shown to have less impact on irreversible and irretrievable commitments of resources.

¹⁷¹ Ex. 17, EIS 101.

¹⁷² Tr. Vol. 1, at 29, (Beckner); Tr. Vol. 2, at 21, (Beckner).

¹⁷³ Ex. 17, EIS 99-100.

¹⁷⁴ Ex. 2, RPA 43; Ex. 17, EIS 61.

¹⁷⁵ Ex. 17, EIS 61.

¹⁷⁶ Ex. 2, RPA 84; Ex. 17, EIS 98.

O. Prohibited Routes (Minn. R. 7850.4300)

186. No HVTL can be routed through state or national wilderness areas. HVTLs can only be routed through state or national parks or state scientific and natural areas where the transmission line would not materially damage or impair the purpose for which the area was designated and no feasible and prudent alternative exists.¹⁷⁷ The Proposed HVTL would not be routed through any wilderness areas, state or national parks, or state scientific and natural areas.¹⁷⁸

P. Relative Merits of the Preferred Route 1, Route 2 and Route 2A

187. Route 1 uses existing right-of-way corridors for the entire 11.5 mile route. In contrast, Route 2 relies upon 4.8 miles new right-of-way to be obtained along portions of the 9.9 mile route. Route 2A relies upon 4.8 miles of new right-of-way on its 10.5 mile route.¹⁷⁹

188. By using the existing transmission corridor, Route 1 will have less impact on aesthetics than Routes 2 and 2A. Route 1 utilizes the existing MN Highway 9 corridor for its entire length.¹⁸⁰

189. Route 1 does not require a new crossing of the Buffalo River. In contrast, Routes 2 and 2A both require new crossings of the river, with related impacts on aesthetics and recreation, and may disturb tree cover that provides wildlife habitat.¹⁸¹

190. Route 2 will pass through the City of Glyndon. This route will have a greater impact on residential areas within the city.¹⁸²

191. Route 1 will have less impact on agricultural production. By following the existing MN Highway 9 corridor, Route 1 has minimal impact on agricultural areas and production. The impact on agricultural areas and production from the substation and switching parcels are common to all routes. While Routes 2 and 2A follow along former BNSF Railway right-of-way, that land has been purchased by individual landowners and some has been returned to agricultural uses.¹⁸³ The Proposed HVTL will have a greater impact on agricultural land along Routes 2 and 2A than along Route 1.

192. All the land needed for the construction of the Proposed HVTL using Route 1 has been acquired by Noble. Noble anticipates that approval of the route permit for Route 1 will allow it to meet its construction and in-service schedule.

¹⁷⁷ Minn. Rule 7850.4300.

¹⁷⁸ Ex. 17, EIS 59.

¹⁷⁹ Ex. 17, EIS 101.

¹⁸⁰ Ex. 2, RPA 40.

¹⁸¹ Ex. 17, EIS 84.

¹⁸² Ex. 2, RPA 81; Ex. 17, EIS 49.

¹⁸³ Ex. 2, RPA 81.

Selection of either Route 2 or 2A will require acquisition of additional easements and may delay Noble's projected in-serve date.¹⁸⁴

193. Route 1 will have less impact on native vegetation and remnant prairie areas than Route 2. Route 1 follows existing right-of-way along MN Highway 9 and so no impact on prairie remnant is anticipated. Selection of either Route 2 or 2A could impact remnant prairie.¹⁸⁵

194. Applying all the factors required for assessing HVTL routes, Route 1 will have less impact on the environment and the community than Routes 2 and 2A.

CONCLUSIONS

1. Any of the foregoing Findings of Fact more properly designated as Conclusions are adopted as such, and any Conclusions more properly designated as Findings of Fact are adopted as such.

2. The Administrative Law Judge and the Minnesota Public Utilities Commission have jurisdiction over the subject matter of this hearing pursuant to Minn. Stat. §§ 14.50, 216B.243, and 216E.02, subd. 2.

3. The transmission line proposed by the Applicant constitutes a "large energy facility" within the definition set forth in Minn. Stat. § 216B.2421, and a "high voltage transmission line" within the meaning of Minn. Stat. § 216E.03, subd. 2.

4. Applicant has the burden of demonstrating compliance with the requirements for the HVTL route permit by a preponderance of the evidence. Applicant has complied with the procedural requirements prerequisite to the issuance of the permits.

5. Applying the factors in Minn. R. 7850.4100 for determining whether to issue a permit for the Proposed HVTL, the ALJ concludes that the routing for the Proposed HVTL is consistent with State goals to conserve resources, minimize adverse environmental impacts, minimize adverse impacts on human settlement, minimize conflicts with land uses, and ensure the state's electrical energy security through efficient, cost-effective power supply and electric transmission infrastructure.

6. All of the routes proposed by Applicant for the construction of the HTVL are acceptable routes under the provisions of Minn. Stat. § 216E.03, subd. 7, and Minn. R. Ch. 7850. Applicant has demonstrated that Route 1 is superior in meeting the State goals set out in the statute and rule to either Route 2 or Route 2A.

Based upon the foregoing Conclusions of Law, the Administrative Law Judge makes the following:

¹⁸⁴ Tr. Vol. at 29-30 (Beckner).

¹⁸⁵ Ex. 2, RPA 81.

RECOMMENDATION

1. That the Commission issue to Applicant the following permit for the Proposed HVTL Route in Clay County, Minnesota:

A route permit for a high voltage transmission line corridor 300 feet wide, along Applicant's preferred Route 1, which is depicted in Appendix A and Figures 1-4 and 8 in the Route Permit Application and runs from the Noble Flat Hill Windpark I substation along the 70th Avenue North right-of-way east for 2.35 miles then generally follows the MN Highway 9 road right-of-way south to the point of interconnection with the existing OTP Sheyenne-Audubon 230 kV transmission line located on the north side of 50th Avenue South (CSAH 12) southeast of Glyndon, Minnesota. Route 1 includes those segments that are described in Table 3-1 on page 17 of the Route Permit Application from north to south: 1-1, 1-2, 1-3, 1-4, and 1-5.

2. That the Commission condition the permit upon placement of the route on the west side of MN Highway 9 in the vicinity of Boutons Addition so that all homes in Boutons Addition will be 250 feet or more from the HVTL.

3. That the Commission condition the permit upon completion of a detailed review of the documented cultural resources and historic properties and consult with the Minnesota State Historic Preservation officer to take any appropriate mitigation measures.

4. That the Commission condition the permit upon Applicant's agreement to review the siting of the transmission line pole placements with the DNR to avoid interfering with the Greater Prairie Chicken habitat.

Dated this 2nd day of December, 2009.

s/Beverly Jones Heydinger
BEVERLY JONES HEYDINGER
Administrative Law Judge

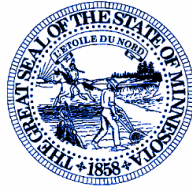
CONTESTED CASE NOTICE

Under the PUC's Rules of Practice and Procedure, Minn. R. 7829.0100 to 7829.3200, exceptions to this Report relating to the issuance of a Route Permit, if any, by any party adversely affected must be filed within 15 days of the mailing date hereof with the Executive Secretary of the PUC, 350 Metro Square Building, 121 Seventh Place East, St. Paul, Minnesota 55101-2147. Exceptions must be specific, relevant to the matters at issue in this proceeding, and stated and numbered separately. Proposed Findings of Fact, Conclusions, and Order should be included, and copies thereof served upon all parties.

The PUC shall make its determination on the application for the Route Permit after expiration of the period to file Exceptions as set forth above, or after oral argument, if such is requested and had in this matter. In accordance with Minn. R. 7850.2700, the PUC shall make a final decision on the Route Permits within 60 days after receipt of this Report.

Any party may also submit exceptions to the summary of public comment concerning siting the Windpark and issuing the certificates of need.

Notice is hereby given that the PUC may accept, modify, condition, or reject this Report of the Administrative Law Judges and that this Report has no legal effect unless expressly adopted by the PUC.



MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS

600 North Robert Street
Saint Paul, Minnesota 55101

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December 2, 2009

To All Parties listed on the attached Service List

Re: *In the Matter of the Noble Flat Hill Windpark, LLC*
Applications for a 201 MW Large Wind Energy Conversion
System Site Permit, a 230 kV High Voltage Transmission
Line Route Permit and Certificates of Need for the Noble Flat
Hill Windpark I Project in Clay County;
OAH Docket No. 15-2500-20657-2;
PUC Nos. IP-6687/TL-08-988;
IP-6687/CN-08-951; IP-6687/WS-08-1134

Dear Parties:

Enclosed herewith and served upon you, as listed on the attached service list, is the Administrative Law Judge's Summary of Testimony, Findings of Fact, Conclusions and Recommendation.

Sincerely,

s/Beverly Jones Heydinger

BEVERLY JONES HEYDINGER
Administrative Law Judge

Telephone: (651) 361-7838

BJH:nh

Enclosure

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
ADMINISTRATIVE LAW SECTION
600 NORTH ROBERT STREET
ST. PAUL, MN 55101

CERTIFICATE OF SERVICE

Case Title: <i>In the Matter of the Noble Flat Hill Windpark, LLC Applications for a 201 MW Large Wind Energy Conversion System Site Permit, a 230 kV High Voltage Transmission Line Route Permit and Certificates of Need for the Noble Flat Hill Windpark I Project in Clay County</i>	OAH Docket No.: 15-2500-20657-2; PUC Nos. IP-6687/TL-08-988; IP-6687/CN-08-951; IP-6687/WS-08-1134
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Nancy J. Hansen certifies that on the 2nd day of December, 2009, she served a true and correct copy of the attached Summary of Testimony, Findings of Fact, Conclusions, and Recommendation as follows:

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret
Volha	Andreyeva	volha.andreyeva@leonard.com	Leonard, Street and Deinard	Suite 2300 150 South Fifth Street Minneapolis, MN 55402	Electronic Service	No
Mike	Beckner	becknerm@noblepower.com	Noble Flat Hill Windpark I, LLC	8 Railroad Avenue Essex, CT 6426	Paper Service	No
Patricia	DeBleeckere	tricia.debleeckere@state.mn.us	MN Public Utilities Commission	Suite 350 121 Seventh Place East St. Paul, MN 55101	Electronic Service	Yes
Sharon	Ferguson	sharon.ferguson@state.mn.us	State of MN - DOC	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	Yes

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